1: Glacken E-5 (1951-1952) 1953 AC7 Okinawa AC7

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Commodore Perry and his staff noted the land tenure system of the Great Lew Chew but did not get any details and were not quite certain what it was.

> "Another obstacle in the way of their improvement is the impossibility of their ever procuring a vested right of ownership in the land. As far as the Commodore could gather information on the subject, it would appear that the soil is held by the government, and its agents are employed to collect and consume its produce. According to the best accounts that could be obtained, the actual cultivator receives not more than two-tenths of the produce. Of the remainder, six-tenths go to the lord of the soil, or ruler, and two-tenths for the expense of supervision of the land, costs of collection, etc. The peasant has thus no stimulus to exertion. Wretched, however, as this system is, and degraded as is the condition of the operative, it is astonishing to see the large returns from agricultural labor." These returns are attributed by the authors to a combination of skill, soil, and climate.[3]

[433]

Goldschmidt (1927) wrote that under the old system the land was the property of the villages and was divided by the elders of the village "according to ancient precept," into equal parcels, considering its location, and that every individual received a parcel. "Large families had therefore correspondingly more parcels; daughters who married took at marriage their parcels with them. Every six years there was a new division, so that everyone received another plot of land and no one could complain, in the long run, over an unjust distribution."

[178]
[423]
[171]

2 (continued from previous page) 86 on communal ownership, 157 on mouth-share-land. The old Okinawan allotment system also is similar to the practice of masha' in the middle East. A village maintains its lands in common and apportions them among villagers periodically. This is found in parts of Iran, Jordan, Arab Palestine, and Syria. See Tannous, Affif I. Land tenure in the middle East. Foreign agriculture (U.S. Dept. of Agriculture), 7 (1943), 171-77.

3 Elsewhere the narrative remarks that, "All the land in Lew Chew is held by government and rented to large tenants, who, in their turn, sub-let it to smaller ones, who are the direct cultivators of the soil." And in another place, it is said that the lands were held by the government as a "metayer system, brought down almost to individuals (or possibly upon an allotment system)." The metayer system, as described by Dr. Green, was a "plan of paying (in this instance as 'taxes') a certain proportion of the produce." Hawks, Perry's expedition to Japan, as cited, I, 220; II, 25-26, 28. See also I, 311.

1: Glacken E-5 (1951-1952) 1953 AC7 Okinawa AC7

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[242] Land appraisal made by people with long experience with the capabilities of their soils under traditional methods of farming, fertilization, and land reclamation is very old in the culture. This in itself is a very significant fact about the culture aside from the obvious technical utility of a land classification system. [556] Land classification is important as a tangible indication of wealth [651] as appraised by representatives of the village. This classification is the basis of taxation of land. A grade two rice paddy pays a lower tax than a grade one. The system of land classification also [433] provides a basis for estimating probable yields.

[632] Township officials are responsible for land classification on a township basis, but each village does its own. In Gushichan township (Hanashiro and Hinatogawa) the elected mayor and his appointed subordinates and local farmers who know the land well have set up the system based on classes and grades of land. In Ginoza-son, the mayor performs a similar function. Since each village has its land classification, a table of correspondences makes possible the comparison of equivalent grades. A composite system for the township can then be made. Grade three rice land in Matsuda, for example, may be equivalent to grade two rice land in Ginoza village. By listing all these together, a village wide classification is made.

The main classifications (tōkyū) of land found in all communities are: (1) Rice lands, (ta, tambo), (2) dry crop land (hatake). It is very difficult to translate the word hatake. So far the expression dry crop land has been used. This land may be contrasted with the wet rice fields; it is dry farming land, usually on rolling slopes or upland. It is land used for cultivation of domestic plants except rice and one or two other minor crops. Rice and dry crop land are the two main classes. (3) Genya land. This word is also difficult to translate. It is variously rendered as wild or waste land, but it is neither wild nor wasteland in an economic sense. It is best described negatively as land not suited for cultivation. Despite its low value, it is important land for its production of grass, reeds, firewood and plant shoots for domestic animals. It is vital in land [185] conservation. The genya land, sometimes on steep or gentle mountain slopes, sometimes cropping out in the midst of cultivated fields or rice paddies, with its dense growth of grass, its occasional pine tree or cycad effectively binds the soil and prevents disastrous run off and flash floods. Around the village of Hanashiro, genya land is rocky and most of its vegetation consists of grass with some shrubs. Before the war, this genya land had more pine and cycads than at present, and the disappearance of the cycad and pine furnished greater opportunity for the omnipresent miscanthus, though there are occasional regrowths of the pine. In Matsuda, the genya land often is indistinguishable from the forest. But the trees are less dense and the privately owned genya is interspersed with the small cultivated paddies and fields. (4) House sites (yashiki, takuchi). There are usually two classes: the first class site is convenient and on a main road or lane; the second class is inconvenient, a rear house, or one

off a main road or village lane. (5) Forest lands (sanrin). This is an important classification in Matsuda, but of minor significance in Hanashiro and Minatogawa. In the latter villages forest land is not recognizable because so many of the trees have been destroyed. In general, forest lands are community owned. (6) Shelter belts or groves of trees along the seashore or on crests of hills for typhoon protection. These are known as bōfurin. The trees are distinct from the forest lands; often they stand in isolated groves. In the south trees for typhoon shelters are confined to the settled area. There are no large groves surrounding and protecting the whole cultivated countryside. (7) Religious sites (haisho). These are small in area, the sites of buildings devoted to the local tutelary deities (ujigami). (8) The village community property (kuyūchi). This may include the village office site and school grounds. (9) A miscellaneous classification (zashuchi). This is also public property, including vegetable plots, small public squares, very small parks, ponds, road meeting places and the like. These combined areas are usually small. (10) In the Gushichan area, there is one further classification: destroyed land (tsuborechi). This is land in the war area which has not been or cannot be restored. The pieces are not large. During the war a bulldozer may have made a road out of this land; it may be filled with stones or the shallow top soil of the land may have been scraped off in leveling for an army post or camp.

The bases for grading land within each class are different. In Gushichan township, the main consideration in grading rice land is the availability of water. First class rice land is where the water is. In this township, there are seven grades of rice land, although any one village may have only four or five. The first five grades in the township are rice lands with two yields a year. Grades one through five are determined by the yield of the plot, through past experience. Grades six and seven are one crop areas. The distinctions between the grades can be seen in the following table:

Grade of Rice Land	Expected Yield in Koku per Chō
1	24
2	18
3	15
4	12
5	7.5
6	6.7
7	6.0

A koku is 5.12 US dry bushels. A chō is 3000 tsubo, about 2.45 acres.

If there is a drought in any year, the grades of land are not changed the following year, but the estimate of expected yield may

single criterion is nearness, providing the land has possibilities. Good land, unless of substantial area, if remote and far from roads, is very time consuming and inconvenient. 311

Genya land in the Oushichan area has two grades. The criterion here is the presence of grass and small shrubs that can be used for firewood. Grade two genya grows little or nothing either because of the large boulders or because it has too many small stones or unconsolidated rock with little vegetation. If it were not for stones or such topographical factors as steepness or ruggedness, some genya land could be classified as poor grade dry crop land. There are, as in rice land, tax differentials according to grade of hatake and genya land: [824] [134] [133] [651]

Grade	Dry Crop Land Tax in Yen	Wild Land (Genya) Tax in Yen
1	13	2
2	12	1.80
3	11	
4	10	
5	9	
6	8	
7	7	
8	6	
9	5	
10	4	

In Ginoza-son, the land classification system is substantially the same. There are six different grades of land classified according to yield in go per tsubo. (A go is 1/1000 of a koku, a tsubo about 4 square yards). [804]

Grade	Yield	Remarks
1	5	Two annual plantings.
2	4	Two annual plantings.
3	3	Dependant entirely on amount of estimated rainfall.
4	2	
5	1.5	
6	1.0	Mountain paddy, very uncertain, depending on rainfall; occasionally two crops a year are possible.

[433] [241]

Dry crop land is judged by criteria similar to those in Oushichan-son. Grade 1 is good soil and convenient to water with good yields as shown by experience. Grades 2 and 3 are convenient to water, but soils are of lesser quality. The classification is also based on experience. Grade 4 is in low places, generally narrow ravines between steep wooded slopes. Grades 5 and 6 have little or no water, are stony, and inconvenient. [134] [312] [133]

1: Glacken E-5 (1951-1952) 1953 AC7 Okinawa AC7

311 Land classification in Okinawa proceeds from the village to the township and then to the whole island. Each class of land in a village has its own grade. By combining these grades a township classification is made. This is done first by village committees determining the grades for each of their classes of land, and then by setting up a table of equivalences after discussion by the committee representing the whole township. Matsuda's first grade dry crop land might be considered by the land classification committee to be equal in quality to Ginoza village's second class land. While there might be only six classifications for any one village, when all these are combined, there may be ten grades for the township. This is shown by the table of correspondences for Matsuda and neighboring villages in Ginoza-son, as of November 1951.

In this illustration, Matsuda's first class rice land is considered second grade on a township wide basis; its sixth grade dry crop land is grade nine, and its first and second class houses are by comparison, grades three and four in the whole township.

311 623 632 With minor variations, the procedures in classifying land are the same in both townships. Each village makes the classification of its own land. This is done by five villagers, chosen by the people for their knowledge and integrity. In Gushichan township, village experts are designated to serve on the township committee.[8] Seven men from the villages are joined by the mayor (sonchō), the vice-mayor (joyaku), the trade and industry section head, the agricultural section head of the township office, a total of eleven men, who then determine the township classifications. These committees make inspections of doubtful cases, often after working hours. The field trips usually end [574] up with a sake party.

In Ginoza-son essentially the same procedures are followed. Each village sends representatives, the number being determined by the area of the village. In late 1951, this village-wide committee had 24 members with the township mayor as chairman. Each village prepares its own land classification map. The local classifications, later combined to make a township-wide classification, have the advantage of limiting the range of grades in a small area and of comparing parcels close together.

Occasionally the grade of a plot is changed to correct an error or to make it consistent with an improvement. A new road may make a plot of land more accessible and thus change its grade.

311 651 433 556 In all the villages studied, land classification was important for the same reasons: for tax purposes, for estimating future production, and for the individual farmer, a means of demonstrating tangible wealth.

8 One representative each is chosen from the villages of Gushichan, Aragusuku, Koshihara, and Nakaza villages, one from Oton and Hanashiro combined, one from Asato and Yoza combined, and one from Hinatogawa-ikku and Hinatogawa-niku combined.

1: Glacken E-5 (1951-1952) 1953 AC7 Okinawa AC7

Introduction

The basic occupation of the Okinawans has been and continues to be agriculture. The agricultural, not the fishing, wood gathering, or stonecutting community is typical. Fishing, stonecutting and forestry have been the occupations of certain villages or areas, or of certain groups within a village. This and the following chapter describe these ways of living.

Agricultural practices gathered from Hanashiro, Nagamo (to some extent), and Matsuda will be presented in this chapter. Hinatogawa has been omitted because it is primarily a fishing and stonecutting community, and there is nothing distinctive or unusual in its agriculture. This presentation avoids the repetitive description of similar activities that would follow from a discussion of each village separately. Significant differences, where they appear, will be mentioned, and in this manner, I hope, the identities of the individual villages will not be lost, despite the topical arrangement.

Okinawan agriculture is basically the story of four crops: rice, sweet potatoes, the soy bean, and sugar cane. Rice is a minor crop. Not all farmers grow it, and rice consumption rests both on homegrown products and imports. Individual farmers occasionally grow both to sell and for home use. Today it is less of a luxury than it was before the war because of the imports and the home grown crop. In Okinawa two crops a year are possible.

The sweet potato is the main crop. Cultivation continues throughout the year. Potatoes often are dug on a day to day basis as required for human or animal consumption. At any one time, the patches of sweet potatoes owned by a farmer may represent all stages of growth from a fresh transplanted field to a patch ready for digging. The sweet potato is the cheapest all purpose food, both for human and animal consumption. Okinawans tire of it because poverty enforces such frequent consumption. Since the war, the increased availability of rice for home use, and the opportunities of purchasing rice have relieved this complete dependence on the sweet potato. Among some families, though these are still few, the sweet potato has become the food of animals, with only select ones used at the table. But for the great majority the sweet potato still is the basic article of diet. It is cheap and easy to cultivate either by men or women. Little can be realized from its sale.

Soy beans are grown for home consumption. Making bean curd in the home is universal. Brown sugar is produced as a cash crop. Some is used in the home as a confection both for adults and children.

1: Glacken E-5 (1951-1952) 1953 AC7 Okinawa AC7

necessities of life. Fishermen are more accustomed to dealing in currency transactions and these are more frequent and freer than in the farming village. 434 511 184 [437]

The economic history of the average Okinawan agricultural village from the late 19th century when Japanese control became firm to the present is largely an account of the fluctuations in rice, sweet potato and sugar cane production. This history is difficult to reconstruct on a local level because of the destruction of records and inexact memories. The point is nevertheless worth making, if only to stress again that these villages are not isolated rural economies. The general experience seems to have been that crop acreages have contracted and expanded in response to local needs and to the demands of trade with Japan. 433 [439]

In the Hanashiro area, to use one example, there is a current interest in rice production because of its high value, and sugar cane seems to be displacing some sweet potato acreage. Sugar, even though coarse and unrefined, has a market in Japan strong enough to warrant production for the cash income at the expense of the cheap and plentiful sweet potato. 433 435

One of the most significant facts of economic life in these villages has been the maintenance of individual farms and crop variety. Plantation monoculture, subject to international price fluctuations and often conducive to local impoverishment, has not developed. 423 311

Private ownership in land, the inheritance of land within the family system, individual farms, tiny as they are, have undoubtedly been a stabilising influence on these village economies. 423 428

512 513 is more likely that the majority of adults have to be satisfied with six and a half hours.

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Chapter 3

Basic Economy

INTRODUCTION

241 433 Taira depends on its fields and forests for a living. Rice and the sweet potato are the principle staple crops; wheat, beans, and vegetables are additional subsistence crops. Firewood and building materials, sugar, pineapple, and silk are main sources of cash. Tea is raised for home consumption.

311 [943] [944] Since the few rivers around Taira are short and the valleys narrow, the area available for wet rice cultivation is limited. Farm land for sweet potatoes is also not too abundant in this mountainous region and is located either on the gently sloped hills or on a few plateaus between valleys. Here and there it rises on skillfully terraced steps along the steep sides of mountains.

311 423 241 The size of land holdings and the quality of soil partly determine whether a family is able to grow additional cash crops or merely subsist. The average holding for each family is about 5 acres of rice land and 6 acres of other farming land. Yet it is important to note that the [933] range and quality of this land vary widely. Some families own only 1½ acres of rice land and an acre of other farm land, while others own as much as 14 acres of rice land and 12 acres of other farm land; good rice paddies produce three times the quantity of poor ones and are wet [511] enough to allow for two crops per year. Of the 141 families questioned, only 15 grew enough rice to be self-sufficient; 123 had to buy extra [433] rice, and only two families raised a surplus for sale. All families grew enough vegetables for home use, and only 18 bought sweet potatoes. Sixty families grew a surplus of vegetables and 16 a surplus of sweet potatoes.

2:Maretzki & Maretzki E-5 (1954-1955) 1963 AC7 Okinawa AC7
Taira

But actually no family is entirely self-sufficient, for each needs to purchase foodstuff as well as ready-made clothes, manufactured mostly in Japan, more substantial building materials, such as better grades of wood, tiles, and cement, tobacco, alcoholic beverages, sweets, toilet articles, some medical supplies, and other luxuries. Farmers buy their tools; students their books and writing materials. Finally, cash is needed to pay taxes.

In addition to the utilization of sugar, pineapple, firewood, and building materials for cash, Tairans also raise pigs for sale to slaughter houses, and some families derive an income from raising silkworms and producing tea. Fishermen sell fish inside and outside the village, and a small group of people are salaried workers or have an income from specialized services.

Village leaders fear dependence on rapidly dwindling forest resources, still the main source of ready cash. They realize that the present modest living conditions of all families could be much improved if Tairans concentrated on increasing the cultivation of subsistence crops and farmed more intensively to raise cash crops. Most people lack this insight, however, and live on a day-to-day basis without much thought of the future. This is an island-wide problem which has the attention of central government agencies, and a great deal of educational propaganda comes to the village through government channels.

AGRICULTURE

The productivity of the land varies not only with its quality but also with the industriousness of the owners. Farmers who show foresight, those who seem to be under less pressure for immediate cash, take off more time from forest work to cultivate fields during planting season. The village headman and council members remind everybody during village meetings and informal discussions that work in the fields should not be neglected. With the approval of the whole community, the first and 15th of each lunar month have been set aside for farming. On these two days it is forbidden to go to the forests to cut wood. Such agreements are usually observed (as a rule), and they help to achieve their purpose but are not completely effective.

Rice is planted and harvested twice a year. The first rice is prepared in January when seeds are put into special beds where they are left to grow into young shoots until March. Until about 30 years ago it was said that all people seeded rice on the same day while prayers were

storing and are kept under the house or on a special shelf on the rafters. Onions, giant radishes, beans, and cabbages are also raised on farm lands. Night soil is rarely used for such vegetables nowadays but is still used on potatoes. Several of these vegetables as well as others are raised by women in small "home-garden" plots.

The hardest working period during the year is in July and August. Within a few weeks after the rice harvest, the soil must be made ready for the second rice crop or the soil must be prepared for dry paddy potatoes. This is also the time for planting the chief sugar crop. All this takes place during the hottest time of the year, when efficiency is greatly reduced by heat and humidity.

Sugar harvest and processing fall in the period between January and March. One field after another is harvested by the owners after arrangements have been made for a date when the cane can be processed. Such arrangements are made with the director of the Taira cooperative, who supervises operations of the sugar mill which is owned by the cooperative. The whole family helps on the day of processing. Women carry bundles of branches and light firewood to heat the kettles. The operation requires the help of someone to feed cane into the small, diesel engine driven press, some to carry the pulp away, and others to watch the kettles in which extracted juice is boiled down to molasses. Finally, a few persons stir the brown residue in wide, open pots until it becomes stalted. Then it is put into tubs that hold about 132 pounds.

The agricultural market for cash crops was totally disrupted at the end of World War II. There was no immediate outlet for sugar products; crops had been destroyed or neglected, and the sugar mill was demolished in the fighting. But by this time most people were too satisfied with the great returns from forest work to invest much time and energy in a crop which takes a year and a half to show any material results. Nevertheless, sugar was the first crop to find a market again.

Pineapple, introduced recently in Taira, has a promising future. Tea is still grown in small quantities, but few families grow more than they need for their own use, although it is a good potential cash crop for this area.

ANIMAL HUSBANDRY

Raising pigs is an important source of cash income for all households in the village. Even the poorest families own at least one, but few families have more than two; in the central village the average is about 1.2 per household. Pigs are given special care and attention.

621 several finance groups are formed simultaneously in the village, and
452 an individual may belong to more than one, this system can create
474 more problems for the community than it helps to redress. Village leaders therefore think that the cooperative could take over the loan functions at low interest rates more effectively.

433 Concern about improving village economy is genuine and foremost.
621 Since the whole island has common economic problems, many sug-
[654] gestions for developing sound village economy originate from the central government. There are many associations and movements which all aim at the same result. Their number is staggering and bewildering to the outsider. In Taira, concern for improvement of conditions is a program of the Women's Association and the Home Improvement Group, associations who try to introduce such changes as better stoves, making of bean paste by villagers, and saving during feasts. There is also an Agricultural Promotion Association which is concerned with improvement of agricultural practices, promotion of cash crops, and
[474] reduction of forest work. All these organizations, along with the cooperative and the village government, work together. An individual may be a member of several. Persons with enough knowledge and experience to assume responsible positions are limited in number, and the same persons appear as leaders in various groups. This puts a heavy burden on them, since few days pass during which their attendance after work is not required at one meeting or another.

Taira assumed a leading position in the township in improving agricultural and general economy, especially by promoting sugar development, pineapple growing, and tea raising in recent years. Mean-
154 while, low income and general poverty are a constant concern to every-
571 body but do not seem to result in constant anxiety. Security, as will be pointed out in other contexts, is provided by being a member of the kinship group and, in the wider sense, of the village as a whole. This helps to share burdens and thus reduce their weight.

Population Density The pattern revealed in a map of population density---Map 4---is approximately the same as that for percentage of arable land. It is somewhat complicated, however, by the urbanization that is going on in Nakagami. A more detailed discussion of the population movements responsible for this situation will be found in a later section of this report. [161]

Farming Almost all of Okinawa's rural people farm, and many are engaged part time in home industries which utilize local products. Particularly noteworthy are the vegetable-producing areas. Kitanakagusuku and Ginowan 'sons' are centers of vegetable production for the American military forces.[1] The inland 'son' of Haebaru grows 53% of the gunto's tōgwā, a wax melon that is a favorite Okinawan food. [433] [241] [262]

One of the most remarkable agricultural areas, Tomigusuku, lies south of the Naha-Mawashi-Oroku urban complex. It grows many kinds of vegetables for the cities, and ranks high in other production. Tomigusuku stands first in the gunto in acreage of green beans, muskmelons, bananas and eggplant. Almost one-fifth of the latter comes from here. It ranks second in tomatoes, and ties with Yonagusuku for second place in weight of mat reeds produced. Miwa, in the far south, leads the gunto in soybean acreage, while Nishihara occupies a similar position in acreage planted to pumpkins.

The most remarkable 'son' in northern Okinawa is Nakijin on the north shore of Motobu peninsula. It leads in gunto acreage of sweet potatoes, leaf tobacco (75.2%), and cucumbers. In animals it leads in numbers of pigs and ducks. It also produces 76% of the banana cloth, or 'bashōfu', of the gunto. This 'son' is mainland Okinawa's chief wheat producer. [231] [235]

The small Okinawan acreage of Irish potatoes is found in Ōgimi-son to the northeast. Yabu is noted for its pickled giant radishes, or 'takuan'. The offshore islands lead in certain special crops. Minami Daitō leads in sugar cane, wheat and barley. Ie Shima seconds in barley, and Izena seconds in wheat. Ie Shima is far ahead in acreage of Irish beans, or 'azuki', accounting for 41% of the gunto's planted acreage of this crop. Though Ie Shima ranks only 15th in soybean acreage, it produces almost a fifth (18.4%) of the gunto's 'miso', in which soybeans are used as a base. 'Miso' making is one of the main home industries on the island. Ie Shima, Kamimotobu and Nakijin retain some of the old 'awa' (German millet) complex, between them accounting for over a third (34.3%) of the acreage of that crop in Okinawa gunto. Kamimotobu is mainland Okinawa's leader in acreage planted to ordinary millet ('kibi'; Panicum miliceum). [252]

Nakagami has little of agricultural distinction. Yomitan leads the mainland in acres of barley and number of rabbits. Gushikawa is second rank in sweet potato acreage, but produces about two-fifths (39.4%) of the gunto's sweet potato starch. It leads in numbers of goats, and is second though not outstanding in numbers of bullocks. [231]

[1] Most of this and following paragraphs derive from Ryūkyū tōkei hōkoku and Okinawa guntō no tembō. Some is based on personal observation and interviewing. [127]

313 Home Industries and Famous Products The forested northern mountains give rise to small scale lumbering, charcoal making,
314 and firewood gathering. Kunigami-son and Kushi-son emphasize the gathering of
• 433 bamboo and firewood. On the other hand the making of charcoal is more import-
[369] ant in Nago, Haneji, and Ōgimi. The urbanization of the south combined with
[391] the postwar extension of roads into formerly inaccessible parts of the north have accelerated exploitation of the northern forest resource. Particularly heavy is the demand for long roof poles, or kichigwā, after every major typhoon.
[237] Kunigami-son and Higashi supply the bulk of these. Where wood is plentiful behind a coastal road, one often finds lime kilns, which process the coral of the reefs.

258 The sea is also a major source of material for home industries. Sea
433 salt is made at Yagaji, Urasoe and Oroku on the west coast, at Henza and Awase
[237] on the east. Kunigami-son prides itself upon its production of seaweed. Buttons from seashells are made in Mawashi. Fish cakes ('kamaboko') are made in quantity in Itoman and Naha, with lesser amounts being produced in Ishikawa and Nago. Dried bonito ('katsuoboshi') is a specialty of Tonaki isle to the west. Motobu-chō holds second place, followed by the western isles of Tokashiki and
505 Zamami. For over a hundred years the small cargo sailboats ('Yambaru-sen')
178 of the east coast have carried forest products from the north. The extension of roads into the northern forests has greatly reduced the amount now carried by sea.

433 Horse breeding is a specialty in Nakazato (the eastern half of Kume-
[232] shima), which has 22% of the gunto's production of horses. However, the pro-
[235] duction of horse and cattle hides is concentrated in the urban areas, which
[231] account for 84% of the hides produced. Nakazato is also famous for production of silk cocoons, being responsible for about two-fifths (38.7%) of the gunto's total. The leading mainland producer is Motobu-chō, with 9%.

Although Okinawa is not self-sufficient in tea, the three areas of
[245] Gushikawa, Ishikawa and Kunigami produce over half of the local tea. In Oku
[474] village of Kunigami, the tea factory is a cooperative venture. Gushikawa
[274] and Chatan pride themselves upon possessing 'sake' and 'awamori' distilleries.
[256] Mawashi is the center of production of farm tools, and accounts for some weaving of banana cloth. Weaving of mats from the "seven isles reed" ('shichitō-i') is a local specialty of Kanegusuku.

[314] Travertine quarries are found in Motobu-chō and Katsuren. A sandy limestone is quarried at Minatogawa in Gushichan.

3: Pitts et al. E,K-S (1953-1954) 1955 AC7 Okinawa AC7

CHAPTER III: AGRICULTURAL HISTORY, LAND USE AND DIET

F. R. Pitts

121 178 The concept of the unchanging Orient certainly fails to appear true in the case of Okinawa, when the past is examined closely. Indeed, it seems hard to find an area where so much change has been accomplished so fast. The following is designed to show some major aspects of that change, particularly insofar as the farmer is concerned.

1. Agricultural History

175 241 198 The Early Days As early as the 1730's when the great Okinawan statesman, Saion, urged the growing of the sago palm 'sotetsu', farmers were already used to orders and suggestions from the gentry as to modification of their traditional ways. But it was not until the growth of population and the money economy that changes were to be brought about, not so much by orders from above, but chiefly by the workings of economic forces.

175 177 433 249 The ultimately most effective agent of change had been the introduction of the sugar cane plant in 1623 and its concomitant technique of sugar manufacture.[1] It was not until a decade after the Japanese took over the islands, however, that sugar production began to increase, and not until after the Russo-Japanese war that sugar really became an important crop in the economy. By 1939 the production of sugar amounted to more than a million tons, and production exceeded consumption by ninefold.[2] By the end of the 1951-1952 winter pressing season, production had declined to 256,000 tons.[3]

175 621 [829] About the time of Commodore Perry's visit the population of Okinawa had begun to grow, and new areas were settled by both commoners and the gentry. Nanahan dates its existence from this period. Of the first three families to settle here, one came from Shuri gentry, and two others were commoners from the main settlement of Tomoyose. Of the seven settlements of the village of Yamada, three were settled by commoners and one by the gentry. All had come from the urban areas of the south in the latter part of the last century. In Okinawa everyone seems to be aware of his place in history, and in the older settlements one often hears the remark, "...they are newcomers; they have been here for only two hundred years."

175 241 178 433 [177] In general the agricultural history of Okinawa falls into three periods. The first saw a self-sufficient economy, in which banana cloth was made in the village. The chief crops were millet, arrowroot, and sweet potatoes. With the introduction of a money economy, and its further intensification under the Japanese, sugar gradually turned from its previous use as a home confection to a full money crop. Rice acreage fell as more sugar was planted, and sweet potatoes found a greater place in the diet. The old crops of millet, cassava, and arrowroot were all but abandoned in Shimajiri, and became less important in the north. The third period is essentially the post-war and still continuing one, in which the growing of vegetables for the

1 Navy Handbook, p. 240.

2 CAARI, p. 156.

3 Summation of U. S. Army Military Government Activities in the Ryukyu Islands, July-November 1946, p. 25.

military competes with sugar as a primary cash crop, and cane fields are being converted back to rice paddies as fast as the farmer's resources permit. A more detailed discussion of the crop changes in the last two or three decades follows. 175 241 178 433

Chronology of Change in Crops The major changes in crops revolve chiefly around the replacement of rice as a cash crop by sugar cane, and the later reversal of this situation. About fifty years ago, rice was the chief cash crop. It was rarely consumed in the home, but was sold in order to meet the monetary expenses of taxes, and to buy occasionally the new commodities that were beginning to appear in the markets. Then, not long after the Russo-Japanese war had ended, the price of black sugar jumped almost overnight from ¥8.50 to ¥64 for a 150-'kin' barrel. Everyone wanted to get a share of this boom in sugar, and most began to convert paddy land into 'hatake' for the growing of cane. They were stuck with the 'hatake' when the price fell after two months. The Japanese subsidized sugar later, however, and most of the land that had been converted remained sugar land. [654]

When the people began returning to their farms more than a year after the end of World War II hostilities, there was little market for sugar. The subsidy had gone with defeat, and providentially the sugar lands were available for the growing of more sweet potatoes. American canned food and sweet potatoes were the main items of diet until about 1949. Gradually farmers began to convert 'hatake' to paddy fields, and to grow rice again---this time less for sale than for home consumption. [262] [177]

The old "bearded rice" varieties (fijimē and mēdakōja) of the nineteenth century were replaced gradually by the shorter-statured but higher-yielding 'hōraimai'. The bearded rice, planted only once a year, had a yield of about one-third the present variety, and had only five or six stalks per plant. The twice a year modern variety yields more and has on the average fourteen to fifteen stalks per plant. As a result of the adoption of the two-crop variety, at least one traditional ceremony was abandoned. This was the tantui, in which the whole village participated before simultaneously planting their seedbeds. Before the war, two-thirds of Okinawa's rice requirements were imported.[1] Indicative of the postwar change to rice are the figures for area of paddy-fields in Kochinda-son; the 114,142 'tsubo' of paddy in February of 1948 had increased to 306,220 'tsubo' by September of 1952. Field investigation proved that conversion to paddy has proceeded at least as fast since 1952 as it did prior to that date. 175 241 433 242 178

Before the First World War almost everyone in Nanahan raised forty to fifty 'tsubo' of millet. It was boiled with glutinous rice to make millet rice-cakes, or 'awamochi'. None is raised now. The same is true of cotton. "It grew only a foot high, but its fiber was very strong and would last a lifetime." [252] Some other crops lasted into the post-war period. Until about 1950 textile bananas and yams were raised in Nanahan, but they both proved to be too weak in typhoons, and their cultivation was abandoned. 178 175 241

1 Summation....July-November 1946, p. 25.

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244 Many root plants such as the giant radish and carrots used to flower
[177] out, and the root would be so stringy that it could not be eaten. About nine years before the war the Japanese brought in many new and better varieties. Nanahan has more vegetables now than the rest of Tomoyose, people say, "...because our houses are scattered and we can get to the vegetable plots easily;
[231] they in Tomoyose can't, and therefore pay less attention to vegetables." Of the seven wards of Tomoyose, only Nanahan has an agreement not to keep chickens so that their vegetables will be protected. Before the war the Irish leek and swiss chard were the only abundant vegetables; others were to be had in only small quantities. The "pine mushroom", or 'metsudake', was gathered "when we used to have pines in the neighborhood." Farmers complain that they can grow less green peas now, because of the great increase in number of rats due to loss of the cat population during the invasion.

Okinawa has always been self-sufficient in sweet potatoes except in occasional time of famine. Even then, dried products of the sweet potato are often used. Many varieties are grown the year around, but in Nanahan only five main varieties were mentioned. Okinawa #100 gives the biggest harvest and in fairly fixed amounts regardless of weather. There were many of White #100 before the war, but few now. It was delicious, but the harvest gradually declined from its former high yield. Just after the war there were many of the tumaikurū variety, but recently few have been planted. The yield had been high, but gradually the seed became bad; it was described as the "most delicious of all sweet potatoes." Yaeyamaakagu was mentioned as a variety still grown in small amounts. The variety which brings the highest market price is Kiirumugwā. This "delicious" potato yields only half that of the average, and hence its price is double.

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241 Perhaps the best way to view the prewar-postwar change in agriculture
433 is to look at the amounts grown by a typical Nanahan farmer. Table I below presents this information.

Table I

Crop	Tsubo Prewar	Tsubo Postwar	Comments
Sugar cane			
(summer planting)	500	350	Postwar home use amounts to 14-15 'kin' (19-20 lb.) annually. Sells about 100 'kin' (132 lb.). Prewar, sold 1400-1500 'kin' yearly.
(spring planting)	300	150	
Sweet potatoes	700	500	Three harvests per year. Not sold much; make starch only if harvest is plentiful.
Soybeans	300	200	Generally sold about 1/3 of each prewar crop, but only when money was needed at home.
Broad beans	150	70	Prewar variety was a small plant, the postwar one very large.

Table I, Cont'd.

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Crop	Tsubo Prewar	Tsubo Postwar	Comments	
Green peas	80	--	None now due to rats.	
Giant radish	50	50	Sell half; use the rest in soups.	
Burdock root	--	50	Sell 90%; use only at home for feasts.	
Carrots	1	5	Sell half the crop.	
Dryland taro	--	20		
Irish potatoes	--	50	Winter crop; seed from Hokkaido.	
Cucumbers	1-2	50	Prewar, all used at home. Now sell 90% at about ¥10 per 'kin'.	
Chives	1	1	Always use in soup. Raise for home use only.	
Wax melon	50	50	Sold half in Itoman prewar; now sell same amount in Naha.	
Pumpkins	1	1	Entirely for home use then and now.	
Kidney beans	100	100	Then and now entirely for home use, in 'gohan' and 'miso'.	
Cabbage	--	60	Sell 90% at ¥2-7 per 'kin'.	
Eggplant	--	4-5 stalks	For occasional home use.	
Green onion	--	10	Entirely for home use, in soups, etc.	
Chinese cabbage	--	20	Sell over two-thirds.	
Bitter melon	--	5	Mainly for home use.	
Mustard cabbage	--	3	Sell half. Pickle temporarily with salt for home use.	[251]
Swiss chard	5	50	Pigs eat the old and large leaves; people the young and tender small ones.	[251]
Garlic	--	3	It is pickled, and is entirely for home use.	[251]
Shallot	--	2	Entirely for home use.	
Red peppers	--	1-2 stalks	Used with soybean curd, or when one has a stomach ache.	[757]

241 Yields Per Acre
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312 Because Okinawa is a sub-tropical country, crops can be grown the year around. Hence the low productivity of a land subject to natural disaster such as drought and typhoons is somewhat compensated for. In the limestone areas of Shimajiri ground water is scarce except after [131] fairly heavy rains. Nanahan has nine small ponds, or kumui, where people wash clothes and sweet potatoes and in which grows the water convolvulus, or unchēbā. Farmers say that if a drought lasts three months, crops do not yield [132] at all. All remember the great drought of 1895 (Meiji 28-nen) when no rain fell for seven or eight months. Even wells dug in river bottoms dried up. The 23 households of Nanahan at present have eight small wells and one large community well which was dug in 1948. Little ditches on the hillsides lead rainwater to the rice paddies, and are fixed so that the water can be directed into wells. If a paddy field is near the farmer's house, a drainage ditch is dug to it for the disposal of used household water which is considered to contribute to a field's fertility. Tables VII and VIII show the yield of crops in Okinawan and American terms.

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Table VII

Crop	Yield per tan[1]	Bushels per acre[2]
Summer rice	1.10 koku	41.1 bushels brown rice
Winter rice	1.16 koku	43.3 bushels brown rice
Upland rice	.72 koku	26.9 bushels brown rice
Common barley	.51 koku	10.4 bushels
Wheat	.59 koku	12.1 bushels
Naked barley	.52 koku	10.6 bushels
Millet	.38 koku	7.85 bushels
Common European millet	.40 koku	8.17 bushels
Soybeans	.70 koku	14.3 bushels
Green peas	.55 koku	11.3 bushels
Broad beans	.71 koku	14.6 bushels
Kidney beans	.71 koku	14.6 bushels
Peanuts	.83 koku	17.2 bushels

Table VIII

Crop	Yield per tan	Tons per acre
Sweet potatoes	1,762 kin	47.6
Irish potatoes	2,176	58.8
Cabbage	3,540	96.1
Other leafy vegetables	1,669	45.1
Giant radish	2,677	72.2
Carrots	2,439	65.85
Pumpkins	2,090	56.5

[1] Ryūkyū tōkei hōkoku, Vol. 3, No. 3, p. 1, 1953 (data for Okinawa Guntō).

[2] Converted according to standard indices, as given in SCAP, Natural Resources Section, Report No. 143, Tokyo, 1951.

Table VIII, cont'd.

Crop	Yield per tan	Tons per acre
Cucumbers	1,570	42.4
Wax Melon	1,859	50.2
Tomatoes	2,789	75.5
Watermelons	1,557	42.0
'I' rush ('Bingo-i')	1,411	38.1
'I' sedge ('Shichitō-i')	1,715	46.3
Tea	197	5.32
Mandarin orange ('mikan')	1,183	31.95
Edible banana	1,629	44.0
Green manure crops	2,994	87.5
Sugar cane (cane weight)[1]	9,000	243.0

Use of Grass, Trees and Brush

Southern Okinawa looks barren to the American observer---few trees break the skyline and great fields of long grass cover the hillsides. The comment heard most often is, "Why don't the Okinawans plow up the grass and plant crops, instead of letting all that land go to waste?" The only proper and truthful answer to this query, of course, is that the grass is utilized to the full and that none "goes to waste".

The "ubiquitous miscanthus" referred to by Glacken actually comprises many grasses, chief among which are 'susuku', 'kaya', and one known by the Okinawan name nājichū. 'Susuki' is used mainly for the making of brooms, which occurs in December after the flowering of this grass has turned the countryside from deep green to a cloudy whiteness. 'Kaya' is used mainly for the thatching of roofs, but is also fed to livestock. Among other plants of the wild land, or 'genya', are the 'mogusa' or fūchibā, used for moxibustion and as a vegetable in soups; the hirahāgusa, used to cure leech bites; and the warabinuffūnii, or edible bracken fern.

The Japanese butter-bur is found in the 'genya', and is utilized as a tobacco substitute in hard times, and occasionally as food. The flowering ginger, or sannin, furnishes leaves for wrapping rice cakes, and fiber for the tying of bundles of sugar cane. The leaf of the inedible potato or m-bashi (Japanese, 'kuwazu-imo') was used by very poor people before the war as a wrapper for 'miso' paste, which they peddled throughout the countryside. The plant is still used to stop the bleeding of wounds. The lantana---known in Hawaii as "haole-koa"---furnished poles for house roofs, leaves for fodder, and beans for tea during famines. Numerous other grasses and herbs are used by the older generation for medicinal purposes, as can be seen by perusal of Tawada's excellent book, Okinawa Yakuyō Shokubutsu Yakkō, 2nd edition, Naha, 1951.

Almost all trees, which in Shimajiri means essentially those surrounding the houses, are used in some way above and beyond their major function as windbreaks in time of typhoons. The leaves of the yūna tree are a native

[1] This information is from the Kochinda-son Office.

2. Rural Industries

178 438 543 Generally speaking, it can be said that much less effort is put forth in the countryside now toward home industries than was the case before the war. In Nanahan making of products at home has declined to the point where rather than being made for sale, they are made only for exhibit at the fair given annually at the local primary school. Even here considerable urging is required by the village officials, and entries are forthcoming only by an appeal to pride in one's village's standing at the fair.

249 257 **Sugar Presses and Mills** Okinawa has two modern western-style sugar refineries, one at Haebaru and one on the isle of Minami Daitō. At the other end of the scale there are the some-400 horse-drawn rotary mills. Between these there are perhaps a dozen or less mills which utilize gasoline-powered motors and are geared to operate on a much larger scale than the rotary presses.

471 257 461 In rebuilding the big mill at Tomoyose which had been destroyed in the war, each family that owned stock in the mill contributed the labor of one person per day of building. On a typical day they started work at eight, had a fifteen-minute "break" at ten, and returned home for lunch for an hour at noon. After an afternoon "break", the work continued until six. Breaks and resumption of work were announced by pounding on an empty oxygen cylinder of large dimensions. The only break I observed lasted for 24 minutes. Tea was served to everyone, and the men sat around discussing how they would be able to pay for the building---which was made of sandy limestone from Minatogawa---and where they would borrow money. The sugar produced was to be sold to the Agricultural Federation in Naha, as is the sugar produced at the smaller mills. However, the sugar was to be sold in 50 kin (66 pound) bags rather than in 100 kin barrels. The potential annual output was estimated at 15,000 bags, or approximately one-half the Tomoyose village production.

471 257 [433]

256 **Kanegusuku Rice Mill** There is one small rice mill in Kanegusuku. All the villagers who have rice land---or about 70% of the families---utilize this mill for polishing. No one in the village uses the old-fashioned hand mill. The owner of the rice mill says that most of the villagers cannot afford to pay cash for having their rice polished. Consequently he takes as multure about two-thirds of one 'gō' from each 'shō' of rice. This amounts to approximately six percent of their rice. The villagers evidently trust him completely, for no one was seen standing around watching while their rice was being polished.

[439]

The owner says that his machines are old and break down frequently. Three machines are required for the whole process. This is not a full-time job except during the harvesting periods. The young man who is owner regularly works on his family's lands. All operation and maintenance are done by him; he does not hire a helper even in the busiest times.

286 433 [178] **Mat-Making in Kanegusuku** The three-cornered sedge ('sankaku-i') is a reed grown in a wet field like rice, and is the basis of 'tatami omote' and 'goza' manufacture, the chief home industry of Kanegusuku. Production of the reed in Kanegusuku today is about one-tenth the pre-

war level. This is due to several factors. The local prices for reed products are said to be too low, and access to Japanese markets is difficult today due to the separation of Okinawa and Japan. Since the war local food shortages and changed tastes and diet have influenced change to greater rice production. Many houses in Kanegusuku lost their mat-weaving looms during the war, depriving them of this means of support. In addition, there is some feeling that it is too time-consuming and the young girls do not like it. 286 433 178

One tsubo produces about two bundles of reed, which is worth about ¥10 a bundle when dried. Usually the reed is not sold, but is made by the producer's family into mats. Two bundles of reeds make one 'goza' mat, which sells for ¥65-100 in Naha. One person can make about two of these mats in one day. However, in almost all families this is part-time work, the woman of the house weaving in her spare time. One family in the village fortunate enough to own two looms employs two village girls full time as long as a supply of reeds is available. 286 433 [435] [464]

The covering for the 'tatami' mat is called 'tatami omote'. An individual can make about six of these per day. They are faster-made than 'goza' because the ends do not have to be tied off and bordered. These sell for about ¥45 in Naha, which place people prefer to Itoman as a market for their reed products. However, rice straw to be used in the base of 'tatami' is sold in Itoman because the cost of transporting the bulky straw to Naha would be prohibitive---it is sold for only ¥1 or ¥2 per bundle. The Agricultural Cooperative is trying to arrange for the sale of 'tatami omote' in Kagoshima where ¥85 per mat can be obtained. The first such postwar collection and sale was made early in 1954. 286 433 435

Prewar Home Industry in Yamada Before the war people in Yamada made much of their own clothing, and were self-sufficient in most of the tools they used. Most of the clothing was made by the women of the village themselves. Most women wove, and many wove constantly when not in the fields. Many had their own looms, but those who did not borrowed looms from their neighbors. 294 [286]

The usual summer garment was a kimono of banana-fiber cloth and the usual winter garment one of cotton. The former was made wholly at home, from the tree to the finished garment. For the cotton kimono the threads were purchased, usually at Kadena, already dyed, and the cloth woven at home. [291]

Several families had silkworms. They got the eggs from Japan and fed the worms on mulberry leaves they grew in their yards. These women spun and wove at home but they sometimes had professional dyers at Kadena or Naha dye the threads for them. Silk garments, like store-bought garments, were only for grand occasions. 231 283 292

Before the war some Yamada women made "panama" hats in their homes as piecework for a hat company. The company furnished the materials and bought the finished product. This was one of the few sources of cash available outside the sugar crop. Baskets, carrying bags, and raincapes made of 294 [434]

175 family, but in actual practice the family often received a far lower percent-
423 age, since with a fixed tax there was no possibility of compensating for crop
651 failure, decline in productivity, and population growth. Tax payments were made in grain though cloth was also accepted. In addition to the inflexibility of the tax system there was a lack of uniformity in tax levies; certain areas such as Kunigami and the outer islands bore an unequal tax load, and farmers in all areas paid a proportionately higher tax than the officials and upper classes. These inequalities inherent in the system plus
[433] the periodic redistribution of plots served to curb any interest which the farmer might have had in improving his holdings; consequently, productivity was said to be very low.

423 Vestiges of this system may still be found in some of the peripheral
178 areas of Okinawa. The village of Oku in northern Kunigami-son still has communal ownership of its forest lands, and on Kudaka Shima off Chinen Peninsula a villager must turn his land over to the community when he goes to live elsewhere.

2. Okinawa-ken (1879-1945). Japanese Administration and the Termination of the Land Allotment System

175 Following the annexation of Okinawa, the new government embarked on
648 a program designed to integrate Okinawa (and the southern Ryukyus) into the
177 national state. The task facing the early administrators was a difficult one, for in addition to differences in language and culture Okinawa was poor in natural resources and possessed an antiquated administrative system. It was soon realized that modernization could not be accomplished overnight; therefore the Japanese allowed virtually all of the old customs to be retained during the first twenty years of their administration, and efforts were directed toward educating a sufficient number of Okinawans to assist
[565] them in carrying out the program. Though the old class system was abolished, members of the former classes continued to subsist on pensions now paid by the new government, and in the rural areas life continued much as before except that the mura replaced the majiri as the land-holding and disbursing
175 unit. By 1899 the government was prepared to introduce more radical changes,
648 and in March of that year Law 59 relating to land adjustment was promulgated.
177 Its objectives were to confirm private ownership and to determine land
423 values for tax purposes. The importance which the administration attached to this measure was clearly stated by Narahara Shigeru, superintendent of the Land Adjustment Board, "Now, the only way to reform the administration is to destroy old customs, but its accomplishment must be commenced with the reform of the system of land taxation, the very foundation of the old customs."[1] Following a mapping survey which began in 1899, officials went into the villages to explain the purposes of the law and to settle conflicting claims. Private ownership was generally confirmed in favor of the cultivator. By 1903 the land reform was carried through to a successful completion.

Private ownership of land was accompanied by the introduction of Japanese laws of property and inheritance; their combined effect was to alter substantially the prevailing social organization and economic balance of the rural community. Land formerly held by the family under the communal

[1] Summary of the Land Adjustment in the Okinawa Prefecture, 1904, p. ii.

[Kanegusuku]

621 The group most dissatisfied with its lot today are the repatriates
423 from the former Japanese possessions. A few of these families were able upon
727 return to take up the lands left by relatives killed in the war or were given land by prosperous relatives, and four repatriate families are virtually landless. All of them, regardless of the size of their present holdings, chafe at their circumstances. One repatriate told the author that he had farmed nearly twenty-five acres in a single plot of sugar on Saipan and that he could never be satisfied with Kanegusuku after this. He is hoping that he will eventually be permitted to return to Saipan.

Before the war that segment of the village which possessed the least amount of land consisted almost exclusively of younger sons who had established branch families. Today this group has been augmented by repatriates from the former Japanese possessions and by emigrants from other Okinawan communities.

621 Farm Laborers During the course of the author's stay in Kanegusuku
241 there was only one full-time farm laborer in the village. This man came from
[463] one of the southern islands in the Ryukyus and was employed for less than a month. After his discharge, the former employer remarked that no outsider has enough interest in the lands of another family to make his employment worthwhile. Transplanting and harvesting rice place the heaviest labor de-
[357] mands upon the family; at these times virtually every member of the family
[476] works in the fields; even the grade-school children are given minor tasks, and the family labor force is supplemented by close relatives or neighbors in a reciprocal labor exchange.

829 Attitudes toward the Land One does not hear or see evidence of
554 any great love or attachment for the soil on the part of the Okinawan farmer.
463 In fact, quite the contrary seems true. Most regard their occupation as a
241 lowly one and feel that they are farmers because they know no other occupation. Land is of value because it provides a livelihood, nothing more, though some exception might be made for house land. Nearly all of the younger generation reflect the thinking of their fathers, and they are eager to get a good education (the diligence of even the average Okinawan student would strike the American teacher as amazing), secure a job in the town or city, and leave the drudgery of the farm village forever. Most
[433] farms are so small that they provide no more than mere subsistence for their cultivators; consequently, the young men see no sense in attending agricultural school when they will have little more than an acre to work. One young man from a fairly prosperous family in the village recently secured a job as a stevedore in Naha, and both he and his wife expressed their pleasure over what they regard as a definite improvement in their status. Though they have not sold the land which they own, they hope that it will never be necessary to return and farm it.

To a large extent this attitude toward the land and farming as an
[178] occupation is directly related to the economic and cultural changes taking place on Okinawa today; the city is an exciting place to live in and employment there is economically more advantageous than farming. Nevertheless, this seems in part the product of the old land system and the low, serf-like status accorded farmers under it. Some of the earlier visitors and officials

[Kitazato]

621 for the lands which they rent, since they have no cash; and they feel that
427 the amount of rent in product from their low yield soils is too great to justify the expenditure of labor. Several other villages in the area lost land to the airfield, so that there is very little land available for rental today. The land which they have rented is of a poor quality, and, consequently, yields are very low. A few fortunate ones have had relatives in neighboring villages who have supplied them with land at a low rental; several who have brothers in neighboring villages have been given free use of some lands. These, however, constitute a small portion of the total village.

628 Neighboring villagers who were interviewed expressed their sympathy for Kitazato's loss of its livelihood. They state that relations between them are good.

621 Morale The villagers are in a low state of morale, and they fre-
829 quently express the opinion that their situation is hopeless. The young people see no future in remaining in the village and are anxious to leave as soon as they are able. Older adults cannot conceive of leaving the village; yet, they are depressed by their circumstances. A number of the middle-aged men remarked that it was too late for them to learn another occupation even if they could get away. The older people particularly mourn the loss of their village: "Our village was beautiful, and we loved it," and "Our land is hopeless now; we cry in our minds just to look at it." All age groups were heard to express statements such as, "Each year things are worse," and "We are slowly starving to death." One informant told the author that he believed someone had been stealing potatoes from his field.

The head of the local agricultural office believes that the village should be brought together again as a single community on the site of the old village near the airfield and that they should be given permission to farm the unused land contiguous to the field. In this way, he feels, they might be able to pull themselves together and start rebuilding anew. He is worried that the people will become so demoralized by their present state as to become slothful, and he is of the opinion that the people cannot continue much longer in their present state.

Outlook for the Future The people of Kitazato are uneasy and pessimistic about their future, and the local 'son' officials, political and agricultural, feel that the villagers cannot long continue in their
621 state of poverty and borderline starvation. It seems to the author that the future holds but three possibilities for them---continued endurance of their present situation, emigration, or an increase in the rent paid for the use of their land.

Without an improvement in their present circumstances, ultimate
433 starvation would seem the only possibility; the figures on land holdings alone will validate that, for ten acres will not provide subsistence for over four hundred no matter how intensive the agricultural techniques. There does not appear sufficient land available for rental with which they might supplement their meager holdings. Many villagers are too poor to cut loose from the wretched plots they farm; it takes cash to move and set up

The mental isolation of the farm village gradually decreased under a national system of education, but the process did not end with schooling. Upon graduating, the youth, male and female, were enrolled in a national young people's association. Later the young men were drafted for service in the national army, and following discharge the veteran was enlisted in a local reserve association which met frequently for military and social purposes. When a man married, established a separate house, and began farming, membership in the farmer's association was automatically conferred. His wife upon marriage transferred from the young women's association to the women's association. There were, in fact, a variety of national organizations covering the various phases and roles of the individual's life; membership was never a matter of choice, but a thing automatically conferred. A stress on patriotism was a strong concomitant in all of these. Membership gave to the individual a sense of participating in a national society extending far beyond the limits of his small village.

It should be stressed that most Okinawans regard the Japanese as providers of modern, enlightened government. The Japanese administration abolished the old class divisions and freed the peasant from his serf-like status. Taxes on arable land were substantially reduced, and the villager for the first time was given some voice in government above the village level. Modern law courts were introduced and justice was administered impartially, not on a class basis as was formerly done.

Inadvertently, perhaps, official Japanese policy did much to destroy the self-sufficiency of the farm village. Prior to the land reform, sugar production did not exceed local needs, but government encouragement and subsidy so increased production that by the time of World War II it exceeded consumption by 900%. This resulted in a food shortage which necessitated heavy importations of basic cereals to compensate.

Japanese manufactured goods also contributed to the decline in self-sufficiency. Factory-made cloth gradually displaced home-woven fabrics, and accordingly cotton and fiber banana were no longer raised. The tools, utensils, and machines of the factory slowly replaced the simpler devices used in the village.

Abolition of the system of communal land tenure contributed to a weakening of the family and particularly of the large extended kin group. The introduction of private property and Japanese laws of inheritance served to create a landless element which often emigrated from Okinawa in search of land or jobs elsewhere. Where formerly the kin group had clustered in certain localities, they now became dispersed over great areas, making continued interaction difficult and often impossible.

Sixty-six years of Japanese rule resulted in a fairly successful amalgamation of Okinawa into the Japanese state; though the Okinawan language and culture were not destroyed, they were severely altered.

Impact of World War II and the American Occupation The war destroyed virtually all of rural and urban Okinawa, and resulted in the death of twenty percent of the population.

Statistics show (see chapter on Agricultural History) that since the termination of the communal land holding system in 1903, there has been a steady decrease in the amount of land cultivated on Okinawa. That this has continued unabated at the same time that the population has rapidly increased seems a paradox. Most certainly improvements in crop yields through research development have not been sufficient to offset this. Nor has the tax burden been excessive or crushing; in fact, quite the contrary is true since the Japanese substantially reduced land taxes when they abolished the communal system. What is more, the shortage of food has for many years necessitated importation of a considerable portion of the food consumed, and in view of the limited job opportunities in pre-war Okinawa, it seems unlikely that this means of livelihood would be overlooked. It would seem that the major reasons for this decline are cultural and historical. 178 241 [311]

It will be recalled that the farmer in the Okinawan kingdom lived in a state of serfdom; class differences were in effect those of caste. When freed from the restrictions by the Japanese, many were likely eager to depart from the farm village. The status of the farmer traditionally has been quite low on Okinawa. People dislike farming, and those who do farm state quite frankly that they are farmers only because they know nothing else, being poorly educated or possessed of little ability. No young men were heard to express a desire to become farmers, and no father wishes this occupation for his son. Pitts and the author noted in studying the household registries for their respective villages that not infrequently the first son has left the farm to seek employment elsewhere, quite contrary to usual Japanese practice. Farming is not a goal for the Okinawan youth today, and at the University of the Ryukyus the quotas for admission to agricultural studies were barely filled in 1954 whereas some of the other departments had three and four times as many applicants as openings. Centuries of a communal land ownership system left the farmer with no feeling of attachment toward his soil such as exists among the Chinese peasantry. Land was frequently reapportioned, and no plots were retained long enough by a given cultivator to give him a feeling of proprietorship. It is said that few ever tried to improve their holdings, as they felt these would soon be allotted to another. 18 241 554 [566]

The nature of taxation under the communal land system together with slowly rising population also made necessary a greater exploitation of land resources than is necessary today. The old tax rate was fixed and was set at a ratio of 40%. If the government had set 100 koku per year as the expected yield for a given village, then the government demanded 40 koku from that village each year. This may perhaps have been satisfactory to the villagers at the time of assessment, but as the population slowly rose there were more mouths to feed out of the villagers' 60 koku portion, and there was no respite from the tax demands in time of crop failure. Consequently, there was increasing pressure to bring more and more land under cultivation; undoubtedly, inferior, low-yield, idle soils were made into farm land. After the peasant was freed from this system and the trend toward sugar production began, foods were imported from outside, and the slow contraction of arable land figures began. 178 241 651 311

The average Japanese farm of 2 1/2 acres and the average Chinese farm of over 4 acres contrast strongly with the Okinawan average (and most are 241 433

241 average, since the range is narrow) of approximately one acre.[1] Even by the
433 most skillful and intensive gardening methods there are limits to what can be extracted from the best of soils. One might say that the average Okinawan
241 farmer is engaged in sub-subsistence farming. With the traditionally low
554 status accorded a farmer and the minute size of his holdings it is hardly any wonder that the Okinawan does not like farming and is eager to accept whatever is available elsewhere.

198 Land loss to military installations has accelerated a process which
241 has been operative for fifty years. In this case, however, the effect has
311 been concentrated in certain areas and not distributed over the island at
727 large; consequently, there has been considerable hardship in these localities. But the main point of bitterness where it has been so engendered is over the loss of livelihood rather than over the loss of the land per se. The point, they feel, is that not only have they lost their lands but that they also are not receiving adequate compensation for this loss. It would not be an exaggeration to state that most perhaps would prefer to be landlords, under reasonable terms, to the military than farm the land if it were available again.

198 Okinawan food production has passed through three phases in the last
433 fifty to sixty years. During the first phase prior to the land reform of 1899-1903 there was a self-sufficiency of food in the rural areas. After the reform, the Japanese subsidized sugar and did much to encourage its production, which rose to a point 900% above local consumption. This led to a sharp decline in acreage planted in other foods, particularly grains---rice, wheat, millet. Since 1943 there has been a shift toward increasing food production[2], and sugar has dropped to about one-tenth its prewar level. In some villages such as Kanegusuku where mat weaving was formerly of considerable importance the irrigated fields formerly planted in sedge have been replanted with rice. Despite the increasing emphasis on food production it is unlikely that the village will ever return to self-sufficiency, for in recent years new tastes have altered the diet and created a dependence on foods not produced within the village.

178 Settlement Patterns The reconstruction of villages after the war often did not follow the prewar pattern. Suttles states that prewar Yamada
361 was a scattered settlement made up of several small hamlets, whereas the new postwar settlement is a nucleated one. The new site is at an important crossroads, while the heart of the old village is virtually empty. North of Yamada on the highway to Nago one can see where the new road has departed from the old one; in several cases the villagers have moved closer to the new road despite the fact that it was much dustier there.

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1 Cressey, George B., Asia's Lands and Peoples, New York, 1944, p. 84, p. 191.

2 Several informants stated that the word went out to the farmers in that year to concentrate all efforts on food production. Undoubtedly this was linked to the turn of events in the war for the Japanese.

Elongated roadside settlements seem to be an increasing phenomena of post-war Okinawa. In central Okinawa (Nakagami) this is particularly apparent in the areas of military camps, where the commercial value of being on the road is fully exploited. Numerous car-washing establishments, repair shops, laundries, souvenir shops, etc., line the roadsides in these settlements. With current expansion and improvement of the highway system there seems increasing likelihood that more settlements of this type will develop. 178 361 [443]

Houses and Buildings Architectural styles and the materials of construction appear to have changed but slightly as a result of the war. There are now thousands of small temporary huts made of scrap materials which will suffice until the individual family can afford a more permanent structure. When new houses are built, the styles are closely similar to those of the prewar period. The major change in the style of country houses appears to have occurred during the Japanese period of administration, for early travelers and investigators report that the typical farmer's dwelling consisted of woven bamboo walls, thatch roof, and dirt floor. These are but rarely found today, and where they do occur, there is always a raised floor as in the case of the Japanese home. In certain areas, such as Kitazato for example, there has been a reversion to this house of woven bamboo and thatch due to poverty, a lack of wood, and the readily available bamboo. The prewar house of wooden walls and frame with a tile roof still remains the most common house type and that which is most frequently built. 178 342 [171]

The use of concrete blocks in building is attributed to American influence; however, their usage to date has been limited mostly to non-residential buildings. Roofing of corrugated iron is sometimes used, but it is regarded as a temporary device. [177]

Interiors have changed but little; rooms are usually relatively bare of furnishings. Frequently the walls are covered with pictures taken from Japanese and American magazines. 177 178 353

The enclosed yard surrounding the Okinawan house often contains considerable evidence of the war. Oil drums have been put to use as rain barrels and privies; American helmets are frequently found serving as pails or buckets; old shell cases are used for support and occasionally, if a sufficient number are available, for decorative fencing; sections of portable landing-strips serve as sidewalks; and on one occasion a Japanese machine-gun was observed in use as a clothes pole. 177 351

Crafts There has been a marked decline in Okinawan handicrafts and a greater reliance placed on factory-made products. The manufacture of cloth, baskets, rope, hats, pottery, raincapes, mats, sandals, etc. has dropped markedly in comparison to the prewar era; yet, it is acknowledged that the war only served to accelerate the decline. Several factors are involved in this process. In many cases the Japanese factory products are cheaper and better than the local article. The cultural domination of Japan also created an attitude that things Ryukyuan were inferior to things Japanese; hence, Japanese products and styles assumed an ascendancy over those of Ryukyuan origin. Lastly, the war destroyed many of the places of manufacture and the machinery employed, and replacement has never been made. 177 178 433 • 28 [329] [727]

178 In Kanegusuku, for example, mat weaving is still of some importance
286 as a home industry. Where formerly nearly all of the houses were engaged in
433 production of mats, today less than half are so engaged, and the acreage planted in sedge is but ten percent of the prewar level. The war caused the loss of many machines; increasing emphasis on food production has brought a conversion of sedge fields into paddies; access to the better markets in Japan is now more difficult than before the war; it is felt to be too time-consuming and the young women today do not like this work.

Formerly there were a number of men in Kanegusuku who were able to construct the looms used in mat weaving. Today, however, no one constructs his own looms; instead, they are purchased from a manufacturer in Itoman.
[463] This particular example is symptomatic of the general decline of do-it-yourself and the increasing reliance placed on specialists.

178 There are some encouraging signs of revival or new life in the manu-
[322] facture of Okinawan art objects. Okinawan lacquer ware, which is acknowledged by some to be the world's finest, is being sold in large quantity to
[323] members of the occupation. The owner of a large pottery works in Naha told the author that pottery from tombs is being collected to serve as models in restoring an older style and superior type of pottery. An Okinawan textile
[284] technique known as biingata (Okinawan; in Japanese, 'Benigata') was virtually lost during the war, but this art is still being carried on by one Shuri family, and recent publicity and aroused interest seems likely to insure survival.

178 Power and Machinery Agricultural machinery has come into use quite
407 recently on Okinawa. Pitts states that the labor-saving rice thresher first came into widespread use in the thirties. Older methods of flailing or rubbing the rice over a mat, canvas, or stone surface were also observed as being in common use. In numerous instances it was brought out that wartime losses had necessitated a return to an earlier and cruder means of threshing.

The old-fashioned, hand-operated rice polisher has gone out of use in Kanegusuku, and all rice is now polished in the village rice mill which operates on a gasoline engine.

In many communities the gasoline-operated sugar mill has replaced the
[257] horse-powered mill. More important, however, is the fact that the small community mill remains popular, and the farmer is resistant toward using the large sugar factories (see chapter on Rural Economy).

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377 Electricity, common only to the towns and cities before the war, is
[373] now found in many villages, and those who are without it are looking forward to its installation. The kerosene lamps now in use in most rural homes cast a dim light and constitute a serious fire hazard in homes of thatch and wood.

178 The bulldozer has come into use as a means of opening new land and
406 constructing rice fields. Farmers in Kanegusuku and Nanahan made use of this method during the period of the authors' study of these two villages. Formerly this sort of work required the labor of a number of men over a considerable

This island has long faced a serious problem of over-population and food shortage; it is not self-supporting in foodstuffs and mainly derives its livelihood from fishing, shipping and ferrying. It has long had a symbiotic relationship with the neighboring island of Takabanare, supplying fish and shipping-ferrying service in return for food, but this has not been rewarding enough in recent years to offset its rapid population increase. A general postwar decline in coastal shipping largely due to the marked improvement of land transportation in highways and vehicles has sharply reduced the number of jobs in this enterprise, and the return of the repatriates has only added to the number seeking jobs. Military employment, however, has filled this gap and staved off mass unemployment. 621 464 505 433 [438]

At the present time nearly one quarter of the village labor force is engaged in military employment. Nearly all of the repatriates and a large number of old residents have entered military employ. Some of these have established temporary residence on the mainland nearer the military installations. A large number, however, commute by ferry boat and bus each day to their place of employment, and at low tide it is possible to walk the mile across the tidal flats to the mainland. 621 464 [484]

There has long been a tradition for the men of Henza to be away from the village much of time, engaged in activities on the sea. Thus, those who are away much of the time in military employment are merely following a long-established pattern. Unlike the absent workers of Kanegusuku, these people are not considered to be cut off from village affairs. All farming activities, much of the family's economic affairs, and some of the functions of government are carried on by women, contrary to usual Okinawan practice. [562]

The villagers regard military employment as a blessing and feel that it has contributed significantly to maintaining village prosperity. Aside from military employment they have little contact with Americans, although a few boat-owners have rented their crafts to American fishing parties. The villagers and their officials recall with considerable fondness their military government officer in the early days of the occupation. To date Henza relations with Americans have been not only good but also profitable; in short, American stock is high on this island. [829] 621 197 829

Summary On Henza and to a far smaller degree in Kanegusuku military employment has largely drawn off the surplus and largely landless population that formerly would have emigrated to other parts of the overseas Japanese empire. In Jagaru and Tobaru military employment has replaced farming as the chief occupation of the villagers. The contribution of military employment to the economy of Kanegusuku is negligible, although it should be noted that the number so engaged increased during the period of the author's study. In Jagaru, Tobaru, and Henza military employment is of vital importance to the village economy, and any sharp decrease will have severe repercussions. 464

Okinawan Attitudes Toward Those Engaged in Military Employment Okinawans make a sharp distinction in their attitudes toward men employed in military jobs and their attitudes toward women similarly employed. There seems to be no stigma of any sort attached to the male who has a job working for the Americans; in fact, 464 562 829

RECOMMENDATIONS

Recommendations on policy can only be made in relation to objectives and therefore we must state first our assumptions about the aims of United States policy on Okinawa. We assume that the aims of United States policy on Okinawa are primarily to promote a stable economy and a friendly attitude among the nearly 500,000 Okinawans toward the United States. Both a stable economy and a friendly population are essential to the defense of the island as a military base. We further assume that essential to both economic stability and friendly attitude are the attainment of higher standards of health and education and greater social and political freedom than existed prior to 1945. And finally we assume that the United States has no intention of retaining the Ryukyus permanently (Secretary of State Dulles has stated that Japan has "residual sovereignty" over the Ryukyu Islands) and that the military forces will be withdrawn and the islands reverted to Japan when the international crisis ends.

With these assumptions then we make the recommendations that follow. Of these recommendations, two deserve special mention here; they are 1) the immediate payment of an adequate rental for lands used by U. S. forces, and 2) the granting of funds to raise the salaries of school teachers. The land question and the status of teachers are the two most serious problems that can be lessened by immediate action, or at least this was the situation as we saw it a year ago. These and other recommendations we give below topically rather than in order of importance.

Economy The economy of Okinawa, not especially healthy before the war, suffered greatly because of the war both through the widespread destruction of the battle and through the sudden increase in population brought by the repatriation of thousands of persons from other parts of the former Japanese empire. The task of reconstruction has been enormous and we are well aware that, considering conditions in 1945 (which two of us observed then at first hand), the present situation is not at all bad. We recommend the following:

1) That the land question be settled immediately. The land question was undoubtedly the most urgent problem that we saw during the course of our research. The study of the village of Kitazato demonstrated that poverty, to the point of malnutrition and possible infanticide, together with considerable anti-American feeling has been caused by the confiscation of land without adequate compensation. We recommend that land be rented, not purchased, and that the amount paid in rent be at least equal to current market value, and that it be paid promptly. It is further recommended that payment for categories of land listed in the land records as "genya" and "sanrin" be according to the size of plot instead of the current practice of a flat rate per plot regardless of size.

2) That consideration be given to the possibility of opening to farming hitherto untilled areas in Northern Okinawa in addition to those areas